

REMARKS

Claims 1-20 are pending in the present application. Claims 1-11 and 13-20 were rejected under 35 U.S.C. §102, and claim 12 was rejected under 35 U.S.C. §103.

Section 102 Rejections

Claims 1-11 and 13-20 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,677,296 (Lischke, *et al.*).

Applicant respectfully traverses these rejections.

In order for a reference to anticipate under section 102, it must disclose, either explicitly, or under the principle of inherency, every claimed limitation of the claimed invention.

Applicant's claims 1 and 9 are directed to methods and systems for measuring dimensions of minute structures that include, *inter alia*, "determining at least two measuring regions over the minute structures", and "calculating dimensions of the minute structures corresponding to the measuring regions". Applicant's claim 18 is directed to a method for measuring dimensions of minute structures that includes, *inter alia*, "determining at least two measuring regions in the image; and calculating dimensions of the minute structures within each measuring region simultaneously."

Lischke discloses a system for measuring length in a scanning particle microscope. Lischke's system includes a calibrated grid mask that is physically disposed a few micrometers above a specimen stage upon which a specimen to be scanned is placed. The specimen stage can be displaced in the *x* and *y* directions relative to the grid mask for the purpose of measuring a specimen. In addition, the grid mask itself is movable with respect to the specimen stage. Lischke discloses how to use the grid mask to determine one measuring region over one minute structure of a specimen to measure a length of the structure by first measuring the distance from a first edge to an adjacent grid

slat, shifting the specimen a number of grid openings until a second edge is visible, and then measuring the distance from the second edge to an adjacent grid slat.

Lischke does not, however, disclose "determining at least two measuring regions over the minute structures" and "calculating dimensions of the minute structures corresponding to the measuring regions", as recited in claims 1 and 9, for Lischke's use of the grid mask to measure a distance involves only one measuring region and calculation of the length of one minute structure. Furthermore, there is no disclosure of "calculating dimensions of the [at least two] minute structures within each measuring region simultaneously", as recited in claim 18.

Thus, Lischke does not disclose the features recited in Applicant's claims 1, 9, and 18. Therefore, Applicant urges that Lischke does not anticipate claims 1, 9, and 18. Reconsideration and withdrawal of these section 102 rejections are respectfully requested.

Claims 2-8 depend from claim 1, claims 10-11 and 13-17 depend from claim 9, and claims 19-20 depend from claim 18, and are thus patentable for at least the same reasons as claims 1, 9, and 18, respectively. Reconsideration and withdrawal of these section 102 rejections are respectfully requested.

Section 103 Rejections

Claim 12 was rejected under 35 U.S.C. §103(a) as being obvious over Lischke in view of either U.S. Patent No. 4,929,041 (Vahala, *et al.*), or U.S. Patent No. 5,659,172 (Wagner, *et al.*).

Applicant respectfully traverses these rejections.

Applicant urges that the Examiner has failed to make out a *prima facie* case of obviousness for these rejections. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill

in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the combination of prior art references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.

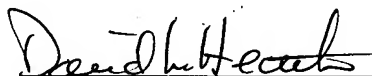
Claim 12, which depends from claim 9, is directed to an apparatus for measuring dimensions of minute structures that include, *inter alia*, "a first electron detector for detecting primary electrons scattered from the minute structures". The Action concedes that Lischke does not disclose such a feature, but then cites either Vahala or Wagner as disclosing an "electron detector for detecting . . . electrons scattered from the minute structures". Applicant urges, however, for the reasons stated above in connection with the section 102 rejection, that Lischke does not teach or suggest "determining at least two measuring regions over the minute structures" and "calculating dimensions of the minute structures corresponding to the measuring regions", as recited in claim 9, and neither Vahala nor Wagner make up for these deficiencies. Therefore, since the combination of Lischke with either Vahala or Wagner does not teach or suggest all of the claimed limitations of claim 12, Applicant urges that a *prima facie* case of obviousness of claim 12 cannot be maintained. Reconsideration and withdrawal of this 103 rejection are respectfully requested.

CONCLUSION

Applicant urges that claims 1-20 are in condition for allowance for at least the reasons stated. Early and favorable action on this case is respectfully requested.

Respectfully submitted,

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